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ABSTRACT

This pamphlet provides information concerning published mathematics tests in eight broad categories: arithmetic; junior high school; batteries and general listings, K-14; high school, general; algebra; geometry; trigonometry; and college-related. For each test listed, the document provides title, author, publisher, and dates of publication for original and revised forms, grade level, list of test forms, information on the availability of norms, and sources of additional information. A directory of test publishers is provided. Nine agencies offering evaluation services related to testing are listed, and the services offered by each are briefly described. A list of references is included. (SD)

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mathematics tests AVAILABLE IN THE UNITED STATES

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Mathematics Tests Available in the United States

THIS PAMPHLET is a revision of a publication of the same name that was first published by the Council in 1959 and revised in 1968 and 1972. In 1972 the mathematics curriculum was fairly stable, the issue of accountability was beginning to assume a prominent role in many school districts, and a number of elementary school programs had been developed with rather detailed behavioral objectives. Today, as we celebrate our 200th birthday, the elementary mathematics curriculum is less stable, accountability remains a very real issue, and interest in behavioral objectives has declined to the point where they are rarely a topic of discussion. In addition, declining test scores in the basic skill areas are making almost daily headlines, and most public and private educational institutions have found it necessary to do some fiscal belt-tightening.

The primary purpose of this pamphlet is to provide a comprehensive listing of mathematics tests available in the United States that may assist educators in meeting their evaluation needs. The types of tests included in this pamphlet are listed in the Contents. Tests covering mathematics from the primary school through the first two years of college are included. A special effort was made to identify tests that might be useful for junior college placement. Publishers should be aware that few tests are available that are sensitive to such placement needs. The section on college-related listings contains a few possibilities, and two programs designed specifically for junior colleges are described under "Related Evaluation Services" on page 28.

No attempt has been made in this edition to include either tests that are designed for a particular text series or tests published outside the United States, although the next edition of this pamphlet is likely to be entitled "Mathematics Tests Available in the United States and Canada." Several new tests have been added to the 1972 listings, and a number of the 1972 listings that are now out of print have been removed. Publishers whose tests appear in this pamphlet were given the opportunity to verify their listings for accuracy and completeness. Although the current listing is intended to be complete, new tests are always being developed. The "Directory of Publishers" on page 27 should be useful in getting information on newly developed tests.

The listing of a test does *not* constitute an endorsement by the National Council of Teachers of Mathematics. Teachers and curriculum specialists who are interested in a particular test should request a sample copy from the publisher and examine it carefully for relevance to the particular use intended.

Although the primary purpose of the pamphlet is to provide a listing of mathematics tests, the pamphlet also contains a number of descriptions of related evaluation services

that may be useful to educators. These descriptions and addresses follow the test listings and the "Directory of Publishers."

Information on the selection and use of tests is available in the references cited in the final section of this pamphlet. Included in these are the seven volumes of the Mental Measurements Yearbook series, constituting the major reference work on tests, with comprehensive lists and reviews. When a reference is made to this source in the test listing, it appears immediately below the publisher's name with a roman numeral identifying the volume and an arabic numeral identifying the entry (not the page). Under *American School Arithmetic Readiness Tests*, for example, "V, 456" is given after the name of the publisher. This means that a review of, or a reference to, these tests is found in the fifth yearbook under entry 456.

Information for each test is given in the following order:

Title
Authorship
Grade levels and forms
Availability of norms
Publisher
Reference to additional information
Original date of publication
Date of latest revision

CONTENTS

Tests 5

Arithmetic 5

Junior High School 11

Batteries and General Listings, K–14 12

High School, General 17

Algebra 18

Geometry 21

Trigonometry 23

College-related 23

Directory of Publishers 27

Related Evaluation Services 28

References 33

3/4

TESTS

Arithmetic

American School Arithmetic Batteries
Willis E. Pratt and Robert V. Young
Primary, grades 2-3, intermediate, grades 4-6, advanced, grades 7-9; Forms X and Y
Norms
Bobbs-Merrill Company
Not listed
1975
None

American School Arithmetic Readiness Test
Willis E. Pratt, Robert V. Young, and Gilbert L. Betts
Kindergarten and grade 1
Norms
Bobbs-Merrill Company
V, 456
1941
1955

The APELL Test (Premath; Available in Spanish)
Eleanor V. Cochran and James L. Shannon
Ages 3-7
Criterion-referenced and norm-referenced
Edcodyne
VII, 740
1969
1972

Arithmetic (Fundamentals and Reasoning)
Robert K. Speer and Samuel Smith
Grades 3-6; Forms A and B
Norms
Psychometric Affiliates
Not listed
1939
1958

Arithmetic (Fundamentals and Reasoning)
Robert K. Speer and Samuel Smith
Grades 6-8; Forms A and B
Norms
Psychometric Affiliates
VI, 613
1938
1960

Basic Arithmetic Skill Evaluation
Lola J. May and Vernon R. Hood
Grades 1-9
Not given
Media Research Associates
Not given
1972
None

Basic Skills in Arithmetic
William L. Wrinkle, Juanita Saunders, and Elizabeth H. Kendel
Grades 6-12; Forms A and B

Norms
Science Research Associates
III, 335
1945
None

Bobbs-Merrill Arithmetic Achievement Tests
William E. Kline and Harry J. Baker
Grades 1-8; Forms A and B
Norms
Bobbs-Merrill Company
VI, 615; VII, 513
1963
None

Buswell-John Diagnostic Test for the Fundamental Processes in Arithmetic
G. T. Buswell and Lenore John
Grades 2-8; detailed test, individually administered
No norms
Bobbs-Merrill Company
II, 1456; IV, 413
1925
None

California Achievement Tests, 1957 Edition—Arithmetic
Ernest W. Tiegs and Willis W. Clark
Lower primary, grades 1-2, and upper primary, grades H2-L4; elementary grades 4-6, and junior high, grades 7-9; Forms W, X, Y, and Z
Norms
California Test Bureau/McGraw-Hill
V, 468; VI, 616
1957
1963 Renorming

Concept Assessment Kit—Conservation
Marcel L. Goldschmid and Peter M. Bentler
Ages 4-8
Norms
Educational and Industrial Testing Service
Reviewed in *Journal of Educational Measurement* 6 (Winter 1969): 263-69 and in *Professional Psychology* 1 (Fall 1970): 491-93
1969
None

Cooperative Primary Tests: Mathematics
Not given
Grades 1.5-2.5, Forms 12A and 12B; grades 1.5-3.9, Forms 23A and 23B
Spring norms for grade 1, spring and fall norms for grades 2 and 3
Educational Testing Service
Not listed
1965
None

Diagnosis: An Instructional Aid, Mathematics
Developed by SRA
Grades 1-4, Level A; grades 4-6, Level B
Criterion-referenced, diagnostic tests
Science Research Associates

Not listed
Level A, 1973
Level B, 1972
None

Diagnostic Tests and Self-Helps in Arithmetic
Leo J. Brueckner
Grades 3–12 (twenty-three tests for screening basic facts, whole numbers, fractions, decimals, percent, measurement)
No norms
California Test Bureau/McGraw-Hill
V, 472
1955
None

Emporia Primary Arithmetic Test
Patricia Pease and Merritt W. Sanders
Grade 1, Forms IA and IB, first semester; Forms IIA and IIB, second semester
Norms
Emporia Kansas State College
VII, 519
1964
None

Emporia Arithmetic Tests, Elementary
Patricia Pease and Merritt W. Sanders
Grades 2–3, Forms IA and IB, first semester; Forms IIA and IIB, second semester
Norms
Emporia Kansas State College
VII, 519
1964
None

Emporia Arithmetic Tests, Intermediate
Ruth Ottestrom and Merritt W. Sanders
Grades 4–6, Forms IA and IB, first semester; Forms IIA and IIB, second semester
Norms
Emporia Kansas State College
VII, 519
1964
None

ERB Modern Arithmetic Test
Frederic Bonan et al.
Grades 5–6, Form B
No norms
Educational Records Bureau
VII, 518
1969, 1970
None

Iowa Test of Basic Skills: Test A, Arithmetic Skills
E. F. Lindquist and A. N. Hieronymus, eds.
Grades 3–9, Forms 1–4
Norms
Houghton Mifflin Company
V, 16; VI, 13
Forms 1 and 2, 1955; forms 3 and 4, 1971
None

Iowa Tests of Basic Skills Primary Battery, Test M, Mathematics Skills
A. N. Hieronymus, E. F. Lindquist, and H. D. Hoover
Grades 1.7–3.5, Forms 5 and 6
Norms
Houghton Mifflin Company
Not listed
1972
None

KeyMath Diagnostic Arithmetic Test
Austin J. Connolly, William Nachtman, and E. Milo Pritchett
Preschool through sixth grade, no upper limit for individual remedial use. One form
Norms
American Guidance Service
Not listed
1971
None

Mastery: An Evaluation Tool, Mathematics
Developed by SRA
Grades 1–8
Criterion-referenced, objective-based, machine-scorable, customized, and catalog tests
Science Research Associates
Not listed
1974 and 1975
None

A Mathematics Test for Grades Four, Five, and Six
Stanley J. Le Jeune
Grades 4–6
Norms
Psychometric Affiliates
VII, 476
1969
None

Metropolitan Achievement Tests: Primary I and Primary II*
Walter N. Durost, Harold H. Bixler, J. Wayne Wrightstone, George A. Prescott, and Irving H. Balow
Primary I, grades 1.5–2.4; Primary II, grades 2.5–3.4
Norms
Harcourt Brace Jovanovich
VII, 14
1970
None
*Note: The mathematics test is not available as a separate test

Metropolitan Arithmetic Tests
Walter N. Durost, Harold H. Bixler, Gertrude H. Hildreth, Kenneth W. Lund, and J. Wayne Wrightstone
Elementary, grades 3–4, Forms A and B; intermediate, grades 5–6, Form A; advanced, grades 7–9, Forms A and Cm
Norms
Harcourt Brace Jovanovich
VI, 627
1958
None

Prescriptive Mathematics Inventory
John K. Gessel
Orange Level (grades 4,5); Aqua Level (grades 5,6); Purple Level (grades 6,7); Level C (grades 7-9)
Norms (criterion-referenced diagnostic tests)
California Test Bureau/McGraw-Hill
Not listed
1971
1975

Public School Achievement Tests: Arithmetic Computation and Arithmetic Reasoning
Jacob S. Orleans
Grades 3 and 8
Norms
Bobbs-Merrill Company
VI, 606, 612
1928, Manual, 1959
None

SRA Achievement Series: Arithmetic Subtest
Louis P. Thorpe, D. Welty Lefever, and Robert A. Naslund
Grades Primary I, Primary II, and 4-9 (multilevel); Forms E and F
Norms
Science Research Associates
VI, 632, VII, 526
Forms E and F: 4-9 (multilevel), Fall 1971; 1-4 (primary), Fall 1972

Stanford Arithmetic Tests: Intermediate I, Intermediate II, and Advanced
Truman L. Kelley, Richard Madden, Eric F. Gardner, and Herbert C. Rudman
Grades 4.0-5.4, 5.5-6.9, 7.0-9.9; Forms W and X for all
Norms
Harcourt Brace Jovanovich
VI, 637; VII, 527
1964-1965
None

Stanford Diagnostic Arithmetic Test, Levels I and II
Leslie S. Beatty, Richard Madden, and Eric F. Gardner
Grades 2.5-4.5, 4.5-8.5; Forms W and X
Norms
Harcourt Brace Jovanovich
VII, 528
1966
None

Stanford Early School Achievement Test: Levels I and II*
Richard Madden and Eric F. Gardner
Level I, grades K.1-1.1; Level II, grades 1.1-1.8
Norms
Harcourt Brace Jovanovich
VII, 28
1969, 1970
None
*Note: The mathematics test is not available as a separate test

Tests of Achievement in Basic Skills, TABS-MATH, Level K
James C. Young
Grade Kindergarten, Forms 1 and 2
Norms
Educational and Industrial Testing Service
Not listed
1974
None

Tests of Achievement in Basic Skills, TABS-MATH, Level 1
James C. Young
Grade 1, Forms 1 and 2
Norms
Educational and Industrial Testing Service
Not Listed
1974
None

Tests of Achievement in Basic Skills, TABS-MATH, Level 2
James C. Young
Grade 2, Forms 1 and 2
Norms
Educational and Industrial Testing Service
Not listed
1974
None

Tests of Achievement in Basic Skills, TABS-MATH, Level A
James C. Young
Grades 3-4, Forms 1 and 2
Norms
Educational and Industrial Testing Service
Not listed
1973
None

Tests of Achievement in Basic Skills, TABS-MATH, Level B
James C. Young
Grades 4-5, Forms A and B
Norms
Educational and Industrial Testing Service
Not listed
1971
None

Tests of Adult Basic Education (adapted from CAT-57)—Arithmetic Test
CTB/McGraw-Hill staff
Forms 1 and 2, Levels D (adapted from junior high level of CAT), M (from the elementary level), and E (from the upper primary level)
Norms
California Test Bureau/McGraw-Hill
VII, 60
1967
None

A Test of Arithmetic Principles, Elementary Form
Ronald C. Welch and Charles W. Edwards, Jr.
Grades 3-6
Indiana University
Ronald C. Welch at Indiana University
1965
None

Junior High School

California Survey Series: Survey of Arithmetic Achievement
Ernest W. Tiegs and Willis W. Clark
Grades 7–9
Norms
California Test Bureau/McGraw-Hill
VI, 638
1959
None

Cooperative Mathematics Tests: Arithmetic
Not given
Grades 7–9, Forms A, B, and C
Norms
Educational Testing Service
VI, 607; VII, 515
1962, 1963
None

Cooperative Mathematics Tests: Structure of the Number System
Not given
Grades 7–8, Forms A and B
Norms
Educational Testing Service
VI, 655; VII, 466
1962, 1963
None

Emporia Arithmetic Tests, Junior High
Jeleen Engleson and Merritt W. Sanders
Grades 7–8, Forms IA and IB, first semester; Forms IIA and IIB, second semester
Norms
Emporia Kansas State College
VII, 519
1964
None

Mathematics Test (Content Evaluation Series)
Gilbert Ulmer
Junior high school (grades 7–9)
Norms
Houghton Mifflin Company
VII, 475
1969
None

Minimum Essentials for Modern Mathematics
Ernest Hayes
Grades 6–8; Forms P and Q
Norms
Hayes Educational Test Laboratory
VI, 587
1963
1971

Minnesota High School Achievement Examinations: Mathematics
V. L. Lohmann, ed.
Grades 7–9; three forms, one revised each year

Norms
American Guidance Service
VI, 577, 582
1962, 1963
1970, 1971, 1972

National Achievement Tests: General Mathematics
Harry Eisner
Grades 7–9; Forms A and B
Norms
Psychometric Affiliates
Not listed
1942
1960

Portland Prognostic Tests for Mathematics
Ernest Hayes
Grades 6 5–8 0 and 8 5–9 0; Forms A and B
Norms
Hayes Educational Test Laboratory
VI, 588
1960
1971

Tests of Achievement in Basic Skills, TABS-MATH Level C
James C. Young
Grades 7–9; Forms A and B
Norms
Educational and Industrial Testing Service
VII, 492
1971
None

Tests of Achievement in Basic Skills (Mathematics)
James C. Young and Robert R. Knapp
Grades 7–9; Forms 1 and 2
Criterion referenced
Educational and Industrial Testing Service
Not listed
1971
None

Traxler Brief Survey Test for Arithmetic Skills
Arthur Traxler
Grades 7–12; Forms A and B
Norms
Bobbs-Merrill Company
III, 336; IV, 409; V, 467
1947
1953

Batteries and General Listings, K–14

Academic Promise Tests: Numerical
C. K. Bennett, M. C. Bennett, D. M. Clendenen, J. E. Doppelt, J. H. Ricks, Jr., H. G. Seashore, and A. G. Wesman
Grades 6–9; Forms A and B
Norms
The Psychological Corporation
VI, 766; VII, 672
1959
1965

American Numerical Test
John J. McCarty
Junior high through college
Norms
Psychometric Affiliates
VI, 604
1962
None

Beckmann-Bell Mathematical Competency Test for Enlightened Citizens
Milton Beckmann and Jack Bell
None specified
None
Mathematical Testing Service
Lincoln, Nebraska
Not listed
1973
None

California Achievement Tests, 1970 Edition— Mathematics
Ernest W. Tiegs and Willis W. Clark
Forms A and B, Levels 1, 2, 3, 4, 5 (grades 1.5–12)
Norms
California Test Bureau/McGraw-Hill
V, 468, VII, 455
1957
1970

Career Planning Program
American College Testing Program Staff
Grades 8–11
Norms
Houghton Mifflin Company (see p. 28)
Not listed
1974
None

Christofferson-Guiler Analytical Survey
H. S. Christofferson and W. S. Guiler
Grades 7–12, Forms 3 and 4
Norms
Bobbs-Merrill Company
V, 457
1930
1957

Comprehensive Testing Program
Committee
Grades K–12, Form A, Levels 1–5
Norms
Educational Records Bureau
Not listed
1974
None

Comprehensive Tests of Basic Skills— Mathematics Test
CTB/McGraw-Hill staff
Forms Q and R, Levels 1 (grades 2.5–4), 2 (grades 4–6), 3 (grades 6–8), and 4 (grades 8–12)
Norms
California Test Bureau/McGraw-Hill
VII, 514

1968
1973 Form S

Contemporary Mathematics Test
CTB/McGraw-Hill staff
Lower elementary (grades 3-4); upper elementary (grades 5-6); junior high (grades 7-9); advanced (grades 9-12); algebra (end of first year of study, grades 8-9)
Norms
California Test Bureau/McGraw-Hill
V.I, 462, 463, 464, 499
1965
None

Cornell Class Reasoning Test
Robert H. Ennis, William L. Gardiner, Richard Morrow, Dieter Paulus, and Lucille Ringel
Grades 4-12, Form X
In *Coop Research Project Report 1680*, ERIC ED003818
Critical Thinking Project, Education Building, University of Illinois, Urbana, Illinois 61801
Not listed
1964
None

Cornell Conditional Reasoning Test
Robert H. Ennis, William L. Gardiner, John Guzzetta, Richard Morrow, Dieter Paulus, and Lucille Ringel
Grades 4-12, Form X
In *Coop Research Project Report 1680*, ERIC ED003818
Critical Thinking Project, Education Building, University of Illinois, Urbana, Illinois 61801
Not listed
1964
None

Cornell Critical Thinking Test, Level X
Robert H. Ennis and Jason Millman
Grades 7-12
Norms
Critical Thinking Project, Education Building, University of Illinois, Urbana, Illinois 61801
VII, 729
1961
1971

Cornell Critical Thinking Test, Level Z
Robert H. Ennis and Jason Millman
Grades 11-12, College
Norms
Critical Thinking Project, Education Building, University of Illinois, Urbana, Illinois 61801
VII, 779
1961
1971

Differential Aptitude Tests: Numerical Ability
G. K. Bennett, H. G. Seashore, and A. G. Wesman
Grades 8-12 and adult; Forms S and T
Norms
The Psychological Corporation
VII, 673

1947
1972

Iowa Tests of Basic Skills: Test M, Mathematics Skills
A. N. Hieronymus, E. F. Lindquist, and H. D. Hoover
Grades 3-9; Forms 5 and 6
Norms
Houghton Mifflin Company
Not listed
1971
None

Metropolitan Achievement Tests: High School Battery*
Walter N. Durost, William H. Evans, James D. Leake, Howard A. Bowman, Clarke Cosgrove, John T. Read
Grades 9-12; Form Am
Norms
Harcourt Brace Jovanovich
VI, 15, V[illegible], 15
1962
None
*Note: The mathematics test is not published as a separate test

1970 Metropolitan Mathematics Tests
Walter N. Durost, Harold H. Bixler, J. Wayne Wrightstone, George A. Prescott, and Irving H. Balow
Elementary, grades 3.5-4.9; intermediate, grades 5.0-6.9; advanced, grades 7.0-9.5; Forms F, G, and H
Norms
Harcourt Brace Jovanovich
VII, 14
1970
None

Modern Mathematics Supplement to the Iowa Tests of Basic Skills
E. F. Lindquist, A. N. Hieronymus, and H. D. Hoover
Grades 3-9; 1 Form
Norms
Houghton Mifflin Company
VII, 481
1968
None

Peabody Individual Achievement Test: Mathematics Subtest
Lloyd M. Dunn and Frederick C. Markwardt, Jr.
Kindergarten through adult. One form
Norms
American Guidance Service
Not listed
1970
None

Sanders-Schrader General Mathematics Test
H. Eugene Schrader and Merritt W. Sanders
High school and college; Forms IA and IB, first semester; Forms IIA and IIB, second semester
Norms
Emporia Kansas State College
VII, 486
1964
None

Scholastic Testing Service Educational Development Series: Mathematics

Oliver F. Anderhalter

Grade 2, Form A; grade 3, Form B; grades 4-6, Forms A and B; grades 6-9, Forms A, B, and C; grades 9-12, Forms A, B, C, and R

Norms

Scholastic Testing Service

V, 484

1963, 1965, 1972

1973, 1975

1973 Stanford Mathematics Tests

Richard Madden, Eric F. Gardner, Herbert C. Rudman, Bjorn Karlsen, Jack C. Merwin

Primary Level I, grades 1.5-2.4; Primary Level II, grades 2.5-3.4; Primary Level III, grades 3.5-4.4; Intermediate Level I, grades 4.5-5.4; Intermediate Level II, grades 5.5-6.9; Advanced, grades 7.0-9.5; Forms A and B

Norms

Harcourt Brace Jovanovich

Not listed

1973

None

Stanford Modern Mathematics Concepts Test

Truman L. Kelley, Richard Madden, Eric F. Gardner, and Herbert C. Rudman

Intermediate II, grades 5.5-6.9; Advanced, grades 7.0-9.5

Norms

Harcourt Brace Jovanovich

VII, 490

1965

None

STEP Series II Mathematics Computation

Not given

Grades 4-12; Forms 4A, 4B, 3A, 3B, 2A, 2B, 1A, 1B

Norms

Educational Testing Service

Not listed

1969

None

STEP Series II Mathematics Basic Concepts

Not given

Grades 4-14; Forms 4A, 4B, 3A, 3B, 2A, 2B, 1A, 1B

Norms

Educational Testing Service

Not listed

1969

None

A Test of Understanding of Selected Properties of a Number System

Robert A. Ashlock and Ronald C. Welch

K-3

Not available

Bureau of Educational Studies and Testing, Indiana University

Ronald Welch at Indiana University

1966

1975

High School, General

California Achievement Tests, 1957 Edition—Mathematics
Ernest W. Tiegs and Willis W. Clark
Grades 9–14, Advanced, Forms X and Y
Norms
California Test Bureau/McGraw-Hill
VI, 564
1957
1963 Renorming

California Survey Series: Survey of Mathematics Achievement
Ernest W. Tiegs and Willis W. Clark
Grades 9–12
Norms
California Test Bureau/McGraw-Hill
VI, 591
1959
None

Cardall Junior Math Reasoning Test
Alfred J. Cardall
Grades 10–12, Forms X and Y
Norms
Cardall Associates
VI, 580
1943
None

Iowa Tests of Educational Development
E. F. Lindquist and Leonard S. Feldt
Test 4, Ability to Do Quantitative Thinking, grades 9–12, Forms X-4 and Y-4
Norms
Science Research Associates
VI, 14 (Total ITED Battery)
1960
(For revised edition, see next entry.)

Iowa Tests of Educational Development
E. F. Lindquist and Leonard S. Feldt
Part 3, Mathematics, grades 9–12, Forms X-5 and Y-5
Norms
Science Research Associates
Not listed
1971
None

Metropolitan High School Mathematics Test*
Walter N. Durost, William H. Evans, James D. Leake, Howard A. Bowman, Clarke Cosgrove, and John D. Read
Grades 9–13, Forms Am and Bm
Norms
Harcourt Brace Jovanovich
VI, 586; VII, 479
1962
None
*Note: Separate test booklets are no longer available, but certain accessories are.

Minnesota High School Achievement Examination: Advanced Mathematics
V. L. Lohmann, ed.
Three forms, one revised each year
Norms
American Guidance Service
VI, 593
1952
1970, 1971, 1972

1973 Stanford Test of Academic Skills*
Eric F. Gardner, Robert Callis, Jack C. Merwin, and Richard Madden
Level I, grades 8–10; Level II, grades 11, 12, and 13; Forms A and B
Norms
Harcourt Brace Jovanovich
Not listed
1973
None
*Note: The mathematics test is not available as a separate test

Tests of Achievement in Basic Skills, TABS-MATH, Level D
James C. Young
Grades 10–12, Forms 1 and 2
Norms
Educational and Industrial Testing Service
Not listed
1972
None

Algebra

Algebra Test for Engineering and Science
A. B. Lonski
High school and college
Norms
Psychometric Affiliates
Not listed
1958
1961

Blyth Second-Year Algebra Test
M. Isobel Blyth
Grades 9–12; Form F
Norms
Harcourt Brace Jovanovich
V, 443; VII, 497
1953
1966

Breslich Algebra Survey Test
E. R. Breslich
First and second semesters; Forms A and B
Norms
Bobbs-Merrill Company
II, 1435
1930, 1931
None

California Algebra Aptitude Test
Noel Keys and Muriel McCrum
One form
Norms
American Guidance Service
IV, 385
1941
1958

Cooperative Mathematics Tests: Algebra I, II, and III
Not given
I, grades 8–9; II, high school; III, high school and college; Forms A and B at each level
Norms
Educational Testing Service
VI, 594; VII, 500, 501
I, II, 1962, III, 1963
None

Emporia State Algebra II Test
Stanley J. Laughlin and Howard P. Schwartz
High school
Criterion-referenced norms
Emporia Kansas State College
Not listed
1974
None

ERB Modern Elementary Algebra Test
Frederic Bonan et al
Grades 8–9; Forms L and M
Norms
Educational Records Bureau
VII, 502
1965, 1966
None

ERB Modern Second-Year Algebra Test
Frederic Bonan et al
High school; Forms X and Y
Norms
Educational Records Bureau
VII, 503
1968, 1969
None

First-Year Algebra Test
Ray Webb and Julius H. Hlavaty
Secondary school
Norms
Psychometric Affiliates
VI, 600
1958
1962

Illinois Algebra Tests
Charles H. Shutter
Test I, first-semester final; II, second-semester midterm; III, second-semester final
Norms
Bobbs-Merrill Company
V, 540
I, 1955; II, III, 1958
None

Iowa Algebra Aptitude Test
H. A. Greene and Darrell Sabers
Grade 8, prealgebra
Norms
Bureau of Educational Research and Service, University of Iowa
II, 1441; III, 327; IV, 393; VII, 505
1931, 1942
1967

Kepner Mid-Year Algebra Achievement Test
Henry S. Kepner, Jr., and Darrell Sabers
First-year algebra
Item norms
Bureau of Educational Research and Service, University of Iowa
VII, 506
1969
None

Lankton First-Year Algebra Test
Robert S. Lankton
Grades 8–12; Forms E and F
Norms
Harcourt Brace Jovanovich
IV, 394; V, 451; VII, 507
1950
1965

Lee Test of Algebraic Ability
J. Murray Lee
Grades 7–8
Norms
Bobbs-Merrill Company
II, 1443; VII, 508
1930
1964

Mid-Year Algebra Test
Not given
Grades 8–12; Form A
Norms
Harcourt Brace Jovanovich
VII, 509
1968
None

Minnesota High School Achievement Examination: Elementary Algebra
V. L. Lohmann, ed.
Three forms, one revised each year
Norms
American Guidance Service
VI, 597; VII, 504
1955, 1963
1970, 1971, 1972

Modern Algebra Test (Content Evaluation Series)
Gerald S. Hanna
Grades 9–12
Norms
Houghton Mifflin Company
Not listed

1972
None

Orleans-Hanna Algebra Prognosis Test
Joseph B. Orleans and Gerald S. Hanna
Grades 7–11
Norms
Harcourt Brace Jovanovich
II, 1444; IV, 396; VII, 510
1928 (Orleans only)
1968

Survey Test of Algebraic Aptitude
Robert E. Dinkel
Grades 7–9
Norms
California Test Bureau/McGraw-Hill
VI, 602
1959
None

Tucker-Sanders First-Year Algebra Test
Charles B. Tucker and Merritt W. Sanders
Grades 9–12; Forms IA and IB, first semester; Forms IIA and IIB, second semester
Norms
Emporia Kansas State College
VII, 511
1964
None

Geometry

Cooperative Mathematics Tests: Geometry
Not given
High school; Forms A and B
Norms
Educational Testing Service
VI, 645; VII, 533
1962, 1963
None

Cooperative Mathematics Tests: Analytic Geometry
Not given
High school and college; Forms A and B
Norms
Educational Testing Service
VI, 643; VII, 532
1963
None

Howell Geometry Test
Edgar N. Howell
Grades 9–12; Forms A and B
Norms
Harcourt Brace Jovanovich
VII, 536
1969
None

Iowa Geometry Aptitude Test
James Maxey and Darrell Sabers
Grades 9–10, pregeometry

Tentative norms
Bureau of Educational Research and Service, University of Iowa
II, 1469; III, 360; VII, 537
1931, 1942
1969

Minnesota High School Achievement Examinations: Geometry
V. L. Lohmann, ed.
Three forms, one revised each year
Norms
American Guidance Service
VI, 649; VII, 534
1955
1970, 1971, 1972

Modern Geometry Test (Content Evaluation Series)
Gerald S. Hanna
Grades 9–12
Norms
Houghton Mifflin Company
Not listed
1971
None

Orleans-Hanna Geometry Prognosis Test
Joseph B. Orleans and Gerald S. Hanna
Grades 8–11
Norms
Harcourt Brace Jovanovich
VII, 539
1968
None

Plane Geometry
Ray Webb and Julius Hlavaty
Secondary school
Norms
Psychometric Affiliates
VII, 540
1958
None

Solid Geometry
Ray Webb and Julius Hlavaty
Secondary school
Norms
Psychometric Affiliates
VI, 653
1960
None

Tucker-Sanders Plane Geometry Test
Charles B. Tucker and Merritt W. Sanders
Grades 9–12, college freshmen; Forms IA and IB, first semester, Forms IIA and IIB, second semester
Norms
Emporia Kansas State College
VII, 541
1964
None

Trigonometry

Cooperative Mathematics Tests: Trigonometry
Not given
High school and college. Forms A and B
Norms
Educational Testing Service
VI, 657; VII, 543
1962, 1963
None

Minnesota High School Achievement Examinations: Trigonometry
V. L. Lohmann, ed.
High school, three forms, one revised each year
Norms
American Guidance Service
VI, 658
1961
1970, 1971, 1972

Plane Trigonometry
Ray Webb and Julius H. Hlavaty
Secondary school
Norms
Psychometric Affiliates
VI, 656
1960
None

Rasmussen Trigonometry Test
Otho M. Rasmussen and O. J. Peterson
Forms A and B
Norms
Emporia Kansas State College
V, 561; Tests in Print, 1134
1951
None

College-related

Advanced Placement Program—Calculus AB, Calculus BC
Committee
College level. Most recent form offered for local administration to college students. Not available to high schools
Norms
Educational Testing Service
VI, 570; VII, 451, 662
1954
1976

Arithmetic Test for Prospective Nurses
Thelma Hunt
High school graduates
Norms
The Center for Psychological Service
IV, 818
1949
None

Cardall Arithmetic Reasoning Test
Alfred J. Cardall
Grades 12–13; Forms A and B
Norms (college freshmen)
Cardall Associates
VI, 617
1947; Manual, 1942
None

Career Planning Program
American College Testing Program Staff
Grades 12–13; Form H
Norms
American College Testing Program (see p. 28)
Not listed
1970
1976

CLEP General Examination in *Mathematics*
Committee
College accreditation or placement; 2 forms
Norms
Educational Testing Service
Not listed
1972
None

CLEP Subject Examination in College Algebra
Committee
College accreditation or placement; 2 forms
Norms
Educational Testing Service
VII, 498, 664
1968
None

CLEP Subject Examination in Trigonometry
Committee
College accreditation or placement; 2 forms
Norms
Educational Testing Service
VII, 542, 664
1968
None

CLEP Subject Examination in College Algebra and Trigonometry
Committee
College accreditation or placement; 1 form
Norms
Educational Testing Service
VII, 454, 664
1968
1970

CLEP Subject Examination in Calculus with Analytic Geometry
Committee
College accreditation or placement; 1 form
Norms
Educational Testing Service
VII, 530, 664
1964
1974

CLEP Subject Examination in Statistics
Committee
College accreditation or placement; 2 forms
Norms
Educational Testing Service
VII, 545, 664
1967
None

Comparative Guidance and Placement (see p. 29)
Committee
Designed for entering junior college students
Norms by modules
Educational Testing Service
VII, 666
1969
1972

Cooperative Mathematics Tests: Calculus
Not given
High school and college; Forms A and B
Norms
Educational Testing Service
VI, 654; VII, 531
1963
None

Doppelt Mathematical Reasoning Test
J. E. Doppelt
Graduate student and personnel selection (high-level measure of numerical reasoning ability)
Norms
The Psychological Corporation
VI, 456; VII, 349
1954
1968

Educational Skills Test/College Edition—Mathematics Test
CTB/McGraw-Hill staff
Designed for entering college students
Norms
California Test Bureau/McGraw-Hill
Not listed
1971
None

Junior College Placement Program (see p. 31)
Not given
Entering junior college students
Norms
Science Research Associates
VII, 669
1967
1969

Kansas Mathematics Test (Arithmetic and Algebra)
H. E. Schrammel
High school and college freshmen; Forms A and B
Norms
Emporia Kansas State College
II, 1457; Tests in Print, 961
1939
1953-1955

Scholastic Testing Service ASK—Skills Analysis of Mathematics
Oliver F. Anderhalter and STS staff
Form A, Levels 12; 23; 34; 45; 56; 67; 78
Criterion-referenced diagnostic test with local and national norms
Scholastic Testing Service
Not listed
1974
None

1973 Stanford Test of Academic Skills*
Eric F. Gardner, Robert Callis, Jack C. Merwin, Richard Madden
Level II, College Edition, Grade 12; Forms A and B
Norms
Harcourt Brace Jovanovich
Not listed
1973
None
*Note: The mathematics test is not available as a separate test

DIRECTORY OF PUBLISHERS

American College Testing Program
P.O. Box 168
Iowa City, Iowa 52240

American Guidance Service, Inc.
Publishers' Building
Circle Pines, Minnesota 55014

The Bobbs-Merrill Company, Inc.
Educational Publishing Division
4300 West 62d Street
Indianapolis, Indiana 46206

Bureau of Educational Research and Service
Division of Extension and University Services
The University of Iowa
C-20 East Hall
Iowa City, Iowa 52242

CTB/McGraw-Hill
Del Monte Research Park
Monterey, California 93940

Cardell Associates
122 Edgehill Road
Bala Cynwyd, Pennsylvania 19004

The Center for Psychological Service of George Washington University
Suite 419
Columbia Medical Building
1835 Eye Street, NW
Washington, D.C. 20006

Critical Thinking Project
Education Building
University of Illinois
Urbana, Illinois 61801

Edcodyne Corporation
One City Boulevard, West
Suite 935
Orange, California 92668

Educational and Industrial Testing Service
Box 7234
San Diego, California 92107

Educational Records Bureau
160 Speen Street
Framingham, Massachusetts 01701

Educational Testing Service
P.O. Box 999
Princeton, New Jersey 08540
1947 Center Street
Berkeley, California 94704

Emporia Kansas State College
Bureau of Educational Measurements
1200 Commercial Street
Emporia, Kansas 66801

Harcourt Brace Jovanovich, Inc
757 Third Avenue
New York, New York 10017

Hayes Educational Test Laboratory
7040 North Portsmouth Avenue
Portland, Oregon 97203

Houghton Mifflin Company
53 West 43d Street
New York, New York 10036

777 California Avenue
Palo Alto, California 94304

666 Miami Circle, NE
Atlanta, Georgia 30324

1900 South Batavia Avenue
Geneva, Illinois 60134

110 Tremont Street
Boston, Massachusetts 02107

6626 Oakbrook Boulevard
Dallas, Texas 75325

Indiana University
School of Education
Education Building
Bloomington, Indiana 47401

Mathematical Testing Service
Milton Beckmann
Secondary Education Department
215 Henzlik Hall
University of Nebraska
Lincoln, Nebraska 68508

Media Research Associates
1735 23d Street
Salem, Oregon 97302

Psychometric Affiliates
Box 3167
Munster, Indiana 46321

The Psychological Corporation
757 Third Avenue
New York, New York 10017

Scholastic Testing Service, Inc.
480 Meyer Road
Bensenville, Illinois 60106

Science Research Associates, Inc.
259 East Erie Street
Chicago, Illinois 60611

RELATED EVALUATION SERVICES

The Career Planning Program (CPP)

The Career Planning Program is a guidance-oriented system designed to help students identify and explore personally relevant occupations and educational programs. The program is designed to function at two levels—grades 8-11

and grades 12-13. For grades 8-11, CPP was developed to assist schools in meeting many of the career guidance needs of their students, with the central goal of stimulating and facilitating both self-exploration and career exploration. The Numerical Skills scale (25 items, 15 minutes) was developed to test the student's ability to perform various kinds of basic arithmetic functions, such as addition, subtraction, multiplication, and division.

For grades 12-13, CPP collects, integrates, and reports information about the student's interests, experiences, and abilities and through an interpretive student report and student booklet helps the student relate this information to career planning. The Numerical Skills scale (36 items, 18 minutes), one of six CPP ability scales, is designed to assess basic arithmetic skills ranging from simple computation to the application of mathematical principles. The scale is designed to assess mathematical reasoning rather than previous coursework and is particularly useful for identifying students needing remediation in mathematics.

Addresses: *For Grades 8-11*

Mr. Dennis K. Palmer
Editor-in-Chief
Career Education & Guidance
Dept. of Measurement & Guidance
Houghton Mifflin Company
1 Beacon Street
Boston, MA 02107

For Grades 12-13

Dr. John D. Roth
Director, ACT Career Planning Programs
Research and Development Division
The American College Testing Program
Box 168
Iowa City, IA 52240

Comparative Guidance and Placement (CGP)

The CGP mathematics tests are designed primarily to assist two-year colleges and vocational-technical institutions in placing students with modest mathematical preparation in an appropriate course offered by the college. Depending on their backgrounds, the students take one of three tests called C, D, and E. Each test consists of two twenty-minute parts as shown below.

Test	Part 1	Part 2
C	35 Computation Questions	25 Applied Arithmetic Questions
D	35 Computation Questions	35 Elementary Algebra Questions
E	35 Elementary Algebra Questions	35 Intermediate Algebra Questions

The tests can be administered with self-scoring answer sheets so that both students and institutions can obtain on-the-spot results.

Address: CGP
Box 2603
Princeton, NJ 08540

Comprehensive Achievement Monitoring

Comprehensive Achievement Monitoring (CAM) provides test results to teachers as information to help them make decisions about their students and their courses. CAM uses criterion-referenced test items (for which behavioral objectives have been previously defined), item-examinee sampling, and frequent test administrations. CAM provides information, analyzed and reported by computer, about individual students' achievement on each objective before instruction, immediately after instruction, and long after instruction, and about a group's achievement on all course objectives at each test administration.

As part of the process of working with school districts and state departments of education in developing criterion-referenced mathematics tests, a bank of objectives and test items has been compiled. These objectives and items are available in booklet form. Also, a "Minimum Competency Level" mathematics test has been developed.

Address: Dr. William P. Gorth
National Evaluation Systems, Inc.
P. O. Box 226
Amherst, Massachusetts 01002

Educational Records Bureau (ERB)

Educational Records Bureau's Comprehensive Testing Program affords its members data that compare mathematics achievement in public schools, suburban schools, and independent schools. The ERB pupil profile projects mathematics performance against student aptitude and indicates whether the expected level of achievement is being reached. Item analysis permits the teacher to pinpoint areas of mathematics strengths and deficiencies.

Address: Educational Records Bureau
160 Speen Street
Framingham, Massachusetts 01002

Instructional Objectives Exchange: Objectives Collection (Grades K-12) Criterion-Referenced Tests (Grades K-9)

Collections consist of instructional objectives and sample test items. Booklet titles are as follows:

Symbolism and Notation, K-9
Numbers and Their Operations, K-9

Figure and Object Characteristics, K-9
Data Relationships, K-9
Algebra, 8-12
Geometry, 10-12

Test sets consist of approximately forty tests in each area. Each test (of five to ten items) is keyed to an amplified objective. Two content-parallel forms of each set are available (A and B). Test titles are as follows:

Sets and Numbers, K-6
Operations and Properties, K-6
Numeration and Relations, K-6
Measurement, K-6
Geometry, K-6
Elements, Symbolism, and Measurement, 7-9
Geometry, Operations, and Relations, 7-9

Address: Instructional Objectives Exchange
Box 24095
Los Angeles, California 90024

Junior College Placement Program (JCPP)

The mathematics component of the JCPP consists of three overlapping forty-item tests. Students are routed to one of the three tests based on a self-scoring device. Students routed to the lower-level test answer questions in conventional arithmetic, those routed to the middle-level test answer arithmetic and geometry questions; and those routed to the upper-level test answer questions in geometry and algebra.

Address: Science Research Associates
259 East Erie Street
Chicago, Illinois 60611

Pennsylvania Retrieval of Information for Mathematics Education System (PRIMES)

PRIMES is a consulting service in mathematics for grades K-8 designed to assist educators in curriculum development, implementation, and evaluation. PRIMES has a comprehensive data base which consists of a lesson-by-lesson analysis of most basal programs, grades K-8. For each textbook, lessons have been analyzed according to mathematical content, expected pupil behavior, and problem type. The *PRIMES Mathematics Content Authority List* contains a list of concepts and skills currently taught in elementary schools. The mathematics subtests of many widely used standardized tests have been analyzed item by item and related to the *PRIMES Mathematics Content Authority List*.

Additional services available through PRIMES include—

1. the use of the computer to monitor pupil achievement;
2. a pupil test-scoring service;
3. criterion-referenced tests correlated to the Content Authority List;

4 instructional kits for remediation,
5 a teacher-training component,
6 assistance in the selection of instructional materials

Address: Dr. Emanuel Berger
Educational Developmental Center
West Chester State College
110 West Rosedale Avenue
West Chester, PA 19380

Score

A criterion-referenced testing system that combines behaviorally stated objectives with a computer-retrievable bank of related items. Available at three levels: Primary (K-3), Intermediate (4-6), and Junior High School (7-8)

Address: Westinghouse Learning Corporation
P.O. Box 30
Iowa City, Iowa 52440

Test Collection—Educational Testing Service

The Test Collection at Educational Testing Service maintains an extensive file of published and unpublished tests and other assessment devices. Also included are files on American and foreign publishers, references to test reviews, and selected references on tests and test evaluations. Qualified persons, whether affiliated with ETS or not, may have on-site access to the materials in the collection. The American Psychological Association's guidelines for access to assessment devices and restrictions requested by individual publishers are observed closely. Those who find it impossible to visit the collection may direct specific questions to the collection by mail.

Address: Test Collection
Educational Testing Service
Princeton, New Jersey 08540

REFERENCES

Armbruster, F. *The U.S. Primary and Secondary Educational Process*. Croton-on-Hudson, N.Y.: The Hudson Institute, forthcoming.

Buros, Oscar Krisen, ed. *The Nineteen Thirty-Eight Mental Measurements Yearbook*. New Brunswick, N.J.: Rutgers University Press, 1938.

_____. *The Nineteen Forty Mental Measurements Yearbook*. Highland Park, N.J.: The Mental Measurements Yearbook, 1941.

_____. *The Third Mental Measurements Yearbook*. New Brunswick, N.J.: Rutgers University Press, 1949.

_____. *The Fourth Mental Measurements Yearbook*. Highland Park, N.J.: Gryphon Press, 1953.

_____. *The Fifth Mental Measurements Yearbook*. Highland Park, N.J.: Gryphon Press, 1959.

_____. *The Sixth Mental Measurements Yearbook*. Highland Park, N.J.: Gryphon Press, 1965.

_____. *The Seventh Mental Measurements Yearbook*. Highland Park, N.J.: Gryphon Press, 1972.

_____. *Tests in Print II: An Index to Tests, Test Reviews, and the Litereature on Specific Tests*. Highland Park, N.J.: Gryphon Press, 1974.

Cronbach, Lee J. "Evaluation for Course Improvement." *Teachers College Record* 64, no. 8, 1963.

Ferguson, R. L., and E. J. Maxey. "Trends in the Academic Performance of High School and College Students." Mimeographed. Iowa City, Iowa: The American College Testing Program, 1975.

Harnischfeger, A., et al. *Test Score Decline: A Review of Evidence and Possible Grounds for Interpretation*. Chicago: CEMREL, forthcoming.

McLaughlin, Kenneth F. *Interpretation of Test Results*. ERIC no. ED 050 176. Washington, D.C.: U.S. Department of Health, Education, and Welfare, 1964. (Available in microfiche for $0.65 or hardback for $3.29 from U.S. Office of Education, 400 Maryland Avenue, SW, Washington, D.C. 20202.)

Tests and Measurements Kit. Rev. ed. Includes "Making the Classroom Test: A Guide for Teachers", "Selecting an Achievement Test: Principles and Procedures"; and "Short-Cut Statistics for Teacher-made Tests: Multiple-Choice Questions—a Close Look." Princeton, N.J.: Educational Testing Service, 1973. ($1.00).